

IN THE CLAIMS

Applicant provides the following complete listing of all the claims in the application that shows the status of all pending claims and markings to show current changes:

1-8 (Cancelled)

9. (New) A system for remotely controlling subsea equipment, comprising:
- a subsea well complex on a sea floor;
 - first and second communicating devices at the well complex;
 - a communications router coupled to the first and second communicating devices;
 - a computer at a location remote from the well complex;
 - a communication link extending between the computer and the router; and

wherein

the router receives signals from the first and second communicating devices and multiplexes the signals onto the communication link.

10. (New) The system according to claim 9, wherein the first communicating device communicates with the router pursuant to a selected data protocol, and the second communicating device communicates with the router pursuant to different data protocol from the selected data protocol.

11. (New) The system according to claim 9, wherein the first communicating device comprises:

a processor that provides signals to electrical devices for controlling valves of the subsea well complex.

12. (New) The system according to claim 9, wherein;

the first communicating device comprises a processor that provides signals to electrical devices for controlling valves of the subsea well complex, the processor communicating with the router with a selected data protocol; and

the second communicating device comprises a sensor that monitors a condition associated with the subsea well complex, the second communicating device communicating with the router free of any restrictions as to data protocol.

13. (New) The system according to claim 9, wherein:

the first communicating device comprises a subsea electronics module of a first subsea tree; and

the second communicating device comprises a subsea electronics module of a second subsea tree.

14. (New) The system according to claim 9, further comprising:

a communications electronic module located at the subsea well complex, the router being located within the communications electronic module;

a plurality of subsea electronics modules at the subsea well complex, each associated with a separate subsea tree of the subsea well complex; and

wherein each of the subsea electronics modules contains a router that communicates with said first mentioned router.

15. (New) The system according to claim 9, wherein:

the router receives multiplexed control signals over the communication link from the computer, the multiplexed control signals including control signals for the first communicating device; and wherein

the router directs the control signals to the first communicating device.

16. (New) The system according to claim 9, wherein the communication link comprises a fiber optics link.

17. (New) A system for remotely controlling subsea equipment, comprising:

a subsea well complex having at least one subsea tree containing electrical devices for controlling valves that control fluid flow in the tree and sensors for monitoring tree conditions;

a processor at the well complex for providing signals to the electrical devices and receiving signals from the sensors;
a communicating device at the well complex;
a computer at a location remote from the well complex;
a communications router at the well complex coupled with the processor and the communicating device;
a communication link between the computer and the router; and

wherein

the router receives signals from the processor and the communicating device and multiplexes the signals onto the communication link.

18. (New) The system according to claim 17, wherein the communicating device communicates with the router at a different protocol and data rate than the processor.

19. (New) The system according to claim 17, wherein the link comprises a fiber optics link.

20. (New) The system according to claim 17, wherein the communicating device comprises a sensor that monitors a condition associated with a well.

21. (New) A system for remotely controlling subsea equipment, comprising:

a subsea well complex having a plurality of subsea trees containing electrical devices for controlling valves that control fluid flow in the trees and sensors for monitoring tree conditions;

a processor associated with each tree for providing signals to the electrical devices and receiving signals from the sensors;

a communicating device associated with each tree that monitors a condition associated with the tree;

a computer at a location remote from the well complex;

a plurality of well tree routers, each associated with one of the trees and coupled to the processor and the communicating device of the same tree, each of the well tree routers communicating with the processor of the same tree by a selected data protocol and communicating with the communicating device of the same tree by at least one other data protocol;

a communication link between the computer and the well tree routers; and

wherein

each of the well tree routers receives signals from the processor and the communicating device of the same tree and multiplexes the signals onto the communication link.

22. (New) The system according to claim 21, further comprising:

a communications electronic module located at the subsea well complex;

a central router in the communications electronic module and linked to each of the well tree routers; and wherein

the communication link extends between the central router and the computer.

23. (New) The system according to claim 22, wherein the communication link comprises a fiber optics link.